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# Sertifikaat

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# Certificate

REPUBLIC OF SOUTH AFRICA

PATENT OFFICE  
DEPARTMENT OF TRADE AND  
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the documents annexed hereto are true copies of:

Application forms P.1, P.2, provisional specification and drawing of South African Patent Application No. 2003/6980 as originally filed in the Republic of South Africa on 8 September 2003 in the name of RADIO SURVEILLANCE TECHNOLOGIES (PTY) LTD and an applicant substituted to SELVANATHAN NARAINSAMY on 15 June 2004 for an invention entitled: "CHEQUE FRAUD PROTECTION".

Geteken te  
PRETORIA  
Signed at

in die Republiek van Suid-Afrika, hierdie  
in the Republic of South Africa, this

dag van  
November 2004.  
day of

Registrar of Patents

REPUBLIC OF SOUTH AFRICA

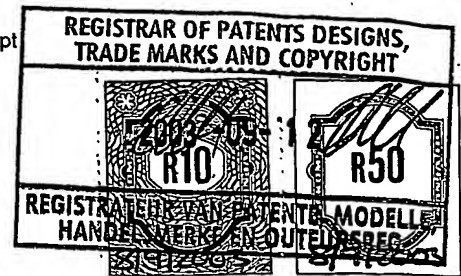
## REGISTER OF PATENTS

PATENTS ACT, 1978

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Full name(s) of applicant(s)/patentee(s)					
71	Radio Surveillance Technologies (Pty) Ltd				
Applicant(s) substituted				Date registered	
71	SELVANARATHAN NARAIN SAMY				15.06.04
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71					
Full name(s) of inventor(s)					
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54	Cheque Fraud Protection				
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PFT Burger reference: PP.3638.RAD					
PFT Burger, Patent & Trade Mark Attorneys 10 Mount Argus Road, Umgeni Heights, Durban - PO Box 546, Durban 4000 DOCEX 305 DURBAN TEL - 573 1054 FAX - 573 1058					
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REPUBLIC OF SOUTH AFRICA  
PATENTS ACT, 1978  
Application for a patent and acknowledgement of receipt  
[section 30(1) - regulation 22]

FORM P1



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71 Full name(s) of applicant(s) Radio Surveillance Technologies (Pty) Ltd  
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54 Title of the invention  
Cheque Fraud Protection

X The applicant claims the priority set out on the enclosed Form P2

21 01 This application is for a patent of addition to Patent Application no.

21 01 This application is a fresh application in terms of s37 and is based on Patent Application no.

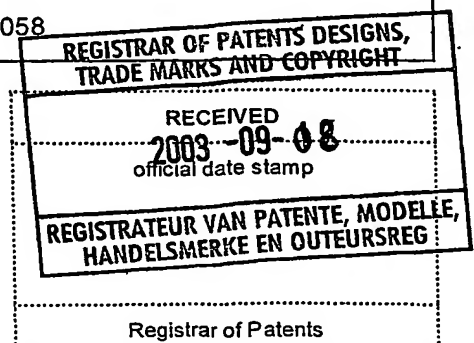
This application is accompanied by:

- 1 A single copy of a provisional specification of 10 pages
- 2 Drawings of 1 sheet

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REPUBLIC OF SOUTH AFRICA  
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FORM P6

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54	Cheque Fraud Protection

### **Background to the invention**

This invention relates to a method and system for processing documentary negotiable instruments.

The invention finds particular application as a cheque fraud prevention system and it will be described with reference to such a system by way of example.

Notwithstanding the increase in electronic funds transfer mechanisms and the increased use of such mechanisms, cheques remain one of the dominant methods of payment in commerce, particularly where larger amounts are concerned. Unfortunately, cheques are a relatively easy target for fraud. This is due largely to the fact that cheque fraud detection remains a predominately manual operation.

This invention seeks to introduce a mechanism at least partly to automate this process.

## Summary of the invention

According to this invention a method of processing payment with the use of a documentary negotiable instrument comprises the steps of:

- providing a central database accessible to participating issuers of negotiable instruments;
- requiring each participating negotiable instrument issuer to enter into the central database, predetermined data pertaining to each negotiable instrument to be processed;
- requiring each negotiable instrument issuer to confirm entry of such data by way of a negotiable instrument issuer code unique to the negotiable instrument issuer; and
- comparing, when in use the negotiable instrument is presented for payment, the data on the face of the documentary negotiable instrument with the data recorded in the central database in respect of that negotiable instrument.

In this way the negotiable instrument issuer by using a unique negotiable instrument issuer code, in essence places an "electronic signature" on the negotiable instrument. If the data on the face of the negotiable instrument is modified, the negotiable instrument will fail the comparison step outlined above when the negotiable instrument is presented for payment, in which event payment can be refused.

Where the negotiable instrument is a cheque, the most common methods of perpetrating a fraud would be to change or forge either or both the payee or the amount. If, in such a situation, the cheque number, the payee and the amount are recorded on the central database, then the forgery will be discovered, since either or both the payee and the amount would differ from the payee and amount data recorded in the central database.

It might be convenient also to record the issue date of the negotiable instrument.

In addition, the system could be enhanced by requiring the person processing the negotiable instrument at the point of presentation to record the fact that the payment is processed should the negotiable instrument pass the comparison referred to above. In this way, processing of the negotiable instrument can be refused at any subsequent presentation of the negotiable instrument for payment.

In practice, the method may involve additional steps, such as providing a local database to the negotiable instrument issuer to enable the issuer to enter data pertaining to one or more negotiable instrument and sending the data pertaining to those instrument as a batch after confirmation of the data by means of the negotiable instrument issuer code.

It will also be appreciated that the method of the invention is essentially implemented in at least three discrete locations:

- the first location being the negotiable instrument issuer location where the negotiable instrument is issued and from where data pertaining to the negotiable instrument is issued and confirmed;

- the second location being the central database where the data pertaining to the negotiable instrument is stored; and

- the third location being the presentation point where the negotiable instrument is presented for payment and the data then appearing on the face of the negotiable instrument is compared with data stored in the central database.

The invention therefore includes a method of issuing a negotiable instrument for processing of the negotiable instrument in accordance with the method of the invention, the issuing method including the steps of issuing a negotiable instrument, entering data pertaining to the negotiable instrument on a central database and confirming entry of the data by way of a negotiable instrument issuer code unique to the negotiable instrument issuer.

The invention also includes a method of operating a central database for the processing of negotiable instruments in accordance with the method of the invention, the database operating method comprising the steps of:

- receiving the entry of data pertaining to negotiable instruments from participating negotiable instrument issuers;

- receiving, from each participating negotiable instrument issuer and in respect of the data pertaining to each such negotiable instrument, a unique negotiable instrument issuer code;

- confirming the validity of each negotiable instrument issuer code so entered by comparing the negotiable instrument issuer code so entered with a negotiable instrument issuer code stored in the central database; and

- permitting a participating presentation point to gain access to the data stored in respect of a particular negotiable instrument when that negotiable instrument is

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presented for payment, thereby to allow comparison between the stored data and the data appearing on the face of the negotiable instrument.

The database operating method may comprise the preliminary step of registering participating negotiable instrument issuers for use of the central database by issuing and storing a negotiable instrument issuer code in the database or an ancillary database in respect of each participating negotiable instrument issuer.

The invention includes a method of presentation of a negotiable instrument for the processing of negotiable instruments in accordance with the method of the invention, the presentation method including the steps of comparing data appearing on the face of a negotiable instrument presented for payment with comparable data stored in the central database in respect of that negotiable instrument and authorising payment if the data is identical and refusing payment if the data is not identical.

The invention also includes a system for processing documentary negotiable instruments, the system comprising:

- a central database accessible to participating issuers of negotiable instruments;
- data entry means by means of which a participating negotiable instrument issuer can enter predetermined data pertaining to a negotiable instrument to be processed into the central database;
- means to enter a negotiable instrument issuer code unique to the negotiable instrument issuer into the system to confirm the validity of the negotiable instrument data entered by the negotiable instrument issuer;
- means to compare the negotiable instrument issuer code so entered against a negotiable instrument issuer code previously stored in the system, thereby to confirm the validity of the negotiable instrument issuer code; and
- means to compare, when in use the negotiable instrument is presented for payment, the data on the negotiable instrument with the data stored in the central database.

Since the system of the invention is essentially intended for implementation in discrete but cooperating parts, the invention includes:

- a negotiable instrument issuer subsystem within which the data pertaining to the negotiable instrument is issued and confirmed;
- a central subsystem constituted by a database or databases in which data pertaining



to negotiable instrument issuers and negotiable instruments is stored; and  
a presentation point subsystem where the negotiable instrument is presented for payment and the data then appearing on the face of the negotiable instrument is compared with data stored in the central database.

The invention therefore includes a central subsystem for the processing of negotiable instruments within the system of the invention, the central subsystem including:

- means to register participating negotiable instrument issuers for use of the system by issuing and storing a negotiable instrument issuer code in respect of each participating negotiable instrument issuer in a database;

- means to receive the entry of data pertaining to negotiable instruments from participating negotiable instrument issuers;

- means to receive, from each participating negotiable instrument issuer and in respect of the data pertaining to each such negotiable instrument, a unique negotiable instrument issuer code; and

- means to confirm the validity of each negotiable instrument issuer code so entered by comparison of the negotiable instrument issuer code so entered with the negotiable instrument issuer code stored for that negotiable instrument issuer in the central subsystem.

In addition, the invention includes a subsystem capable of issuing a negotiable instrument for processing of the negotiable instrument within the system of the invention, the subsystem including:

- data entry means by means of which a participating negotiable instrument issuer can enter predetermined data pertaining to a negotiable instrument to be processed into the central database; and

- means to enter a negotiable instrument issuer code unique to the negotiable instrument issuer into the system to confirm the validity of the negotiable instrument data entered by the negotiable instrument issuer.

The invention also includes a subsystem for processing the presentation of a negotiable instrument within the system of the invention, the presentation subsystem including means to compare data appearing on the face of a negotiable instrument presented for payment with comparable data stored in the central subsystem in respect of that negotiable instrument.

The presentation subsystem may include means to confirm authorisation of payment of the negotiable instrument if the data on the negotiable instrument is identical to the data stored in respect of that negotiable instrument in the central subsystem and means to confirm the refusal of payment if the data is not identical.

The system and method of the invention can be implemented using internet technology, to which end the data entry means may include an entry terminal by means of which negotiable instrument data may be entered, confirmed and communicated to the central database by way of an internet link.

The data entry terminal may be implemented entirely in software that is adapted for use on a personal computer or the like.

#### **Brief description of the drawings**

The invention will be further described with reference to accompanying drawing which is a block diagram illustrating a cheque fraud protection system according to the invention.

#### **Description of embodiments of the invention**

The cheque fraud protection system illustrated in the drawing comprises three discrete subsystems:

an issuer subsystem;

a central processing subsystem; and

a presentation point subsystem.

It is anticipated that a large number of negotiable instrument issuers will participate in a system such as this. The same applies to the presentation point subsystem which will see a large number of presentation points participating in the system.

Each issuer subsystem 10 comprises a data entry terminal 12 with a local database 14 and a issuer front end 16. The issuer front end 16 is intended to provide an issuing user with data entry forms. It also provides an internet link.

The central subsystem 100 comprises a central database 102, an issuer interface 104 and a presentation point interface 106.

The presentation points 200 each comprise a data entry terminal with a presentation point front end 104 that provides the user at the presentation point with data entry and data query forms.

In operation, payments are processed through the system as follows.

Cheque issuers wishing to participate in the system must first register with the system. In the process of registering such a cheque issuer, a negotiable instrument issuer code unique to the cheque issuer is registered on the system. These unique negotiable instrument issuer codes will be stored in the central subsystem 100, either as part of the central database 102 or in a separate database. The negotiable instrument issuer code may be anything from a password to a biometric code and various levels of access may be provided to facilitate operation of the system. In this way, operator personnel will be able to enter data pertaining to one or more cheques 18 into the local database 14 forming part of the data entry terminal 12 using data entry forms provided by the issuer front end 16. However, the person with final cheque signing authority at the issuer will then be required to enter the negotiable instrument issuer code by means of which the data pertaining to the cheque or cheques 18 will be confirmed and validated.

Most cheque fraud involves manipulation of payee or amount data on the face of the cheque. The most important data pertaining to a cheque to be entered on the system, therefore, includes data pertaining to the payee, the amount (preferably in words and in numbers) and data pertaining to identification of the cheque, typically the cheque number. It would be convenient, in addition, to enter data pertaining to the date of issue of the cheque.

Once all of this data pertaining to the cheque 18 has been entered into the data entry terminal 12, the cheque issuer then validates the data by entering the appropriate negotiable instrument issuer code. In this way, the cheque issuer, in effect, places an "electronic signature" on the cheque. This "electronically signed" cheque is then sent to the payee for processing in the normal course. At the same time, the issuer front end 16 transmits the validated data pertaining to the cheque 18 by way of an internet link to the issuer interface 104 in the central subsystem 100 which transmits the data for processing and storage in the central database 102.

The cheque 18, having made its way to the payee, is then presented for payment at a presentation point 200 which may be constituted by the bank of the payee, a bank teller or some other cheque clearing facility.

In a conventional cheque processing system the cheque 18 will be validated upon presentation using largely manual techniques, including visual inspection of the cheque for possible tampering and forgery and visual comparisons of the actual signature of the cheque signatory with sample signatures of that signatory, once again to determine if any forgery has taken place.

In contrast with this, the system of the invention requires no such inspection.

At the presentation point 200, the relevant data pertaining to the cheque 18 is simply entered into the presentation point front end 104 forming part of the presentation point data entry terminal 102. The presentation point front end 104 communicates, via internal or internet link with the presentation point interface 106 of the central subsystem 100 which draws the validated data pertaining to the cheque 18 into the presentation point front end 104. This allows immediate comparison between the validated data pertaining to the cheque 18 with the data appearing on the face of the cheque 18 at the time of presentation.

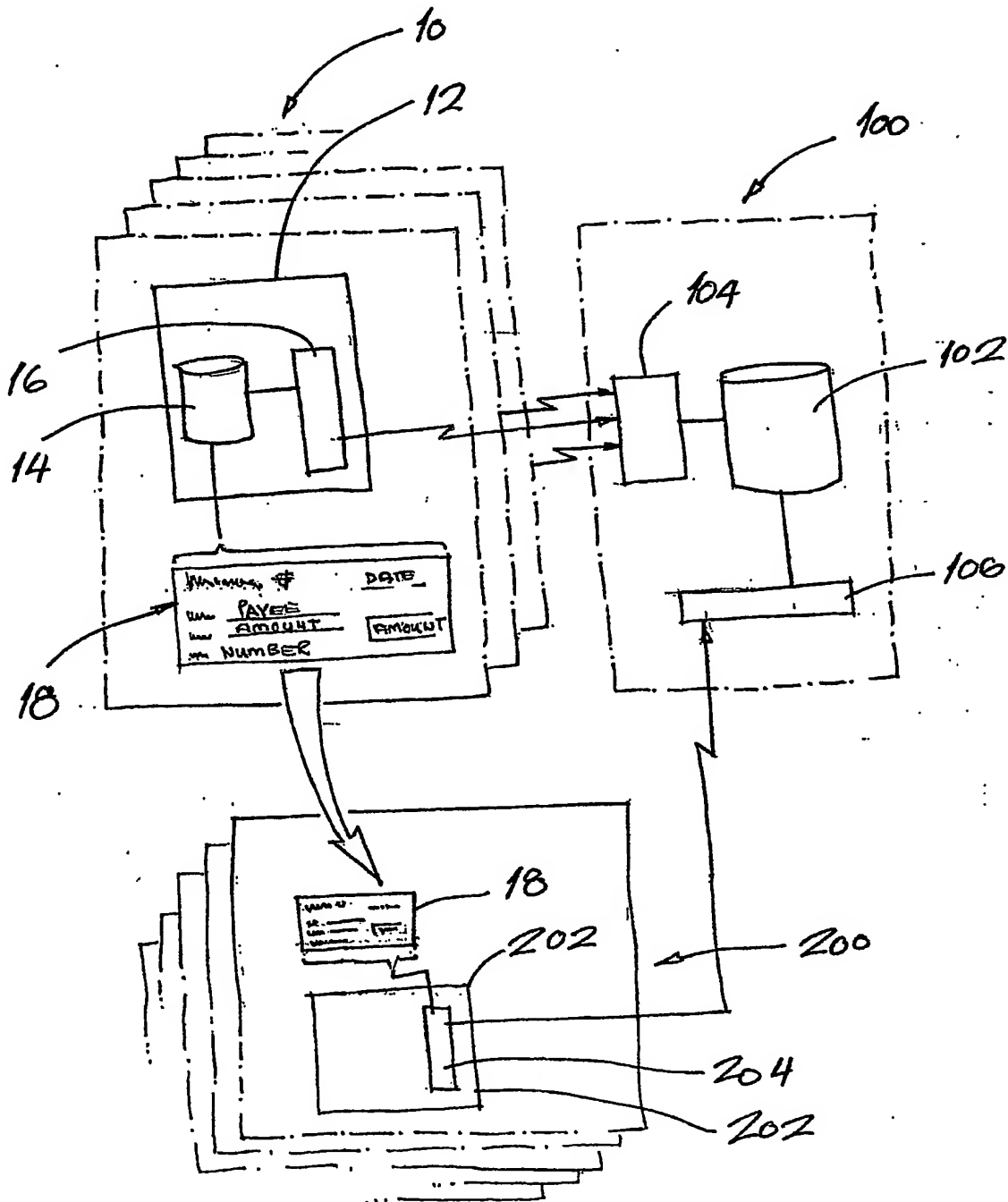
No other visual inspection or comparisons are required. If the data on the face of the cheque 18 corresponds identically with the validated data stored in the central database 102, the cheque can be cleared for payment or the account of the payee can be credited.

If, on the other hand, the data on the face of the cheque 18 does not correspond identically with the corresponding data stored in the central database 102, the cheque cannot be cleared for payment.

Other than this, no inspection of the cheque is required nor is any comparison of signatures required.

Dated 8 September 2003

  
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